

**Amendments to the Claims**

Please amend Claims 1, 3 and 4. The Claim Listing below will replace all prior versions of the claims in the application:

**Claim Listing**

1. (Currently Amended) A gas conversion system for removing NO<sub>x</sub> and SO<sub>x</sub> from gases comprising:
  - a duct having a rectangular cross section having a width and height through which the gases flow, the duct having a port for introducing a reaction agent into the duct to the gases; and
  - first and second electron beam emitters each having a single exit window mounted to the duct and sealed over openings in the duct opposite from each other in opposed axial alignment for directing opposed electron beams into the duct and causing components of the NO<sub>x</sub>, SO<sub>x</sub> and reaction agent to react to remove NO<sub>x</sub> and SO<sub>x</sub> from the gases, the duct being shaped and sized, and the electron beam emitters being operated, positioned, configured, shaped and sized to generate generally axially straight uniform electron beams directed into the rectangular cross section of the duct that are shaped to axially combine together to provide complete continuous uniform rectangular electron beam coverage across the width and height of the rectangular cross section of the duct with generally evenly dispersed electrons.
2. (Original) The gas conversion system of Claim 1 in which the reaction agent is ammonia.
3. (Currently Amended) A treatment system for removing a compound comprising:
  - a duct having a rectangular cross section having a width and height through which gases flow, said compound being mixed with the gases, the duct having a port for introducing a reaction agent into the duct to the gases; and
  - first and second electron beam emitters each having a single exit window mounted to the duct and sealed over openings in the duct opposite from each other in opposed axial alignment for directing opposed electron beams into the duct and causing

components of the compound and reaction agent to react to remove the compound from the gases, the duct being shaped and sized, and the electron beam emitters being operated, positioned, configured, shaped and sized to generate generally axially straight uniform electron beams directed into the rectangular cross section of the duct that are shaped to axially combine together to provide complete continuous uniform rectangular electron beam coverage across the width and height of the rectangular cross section of the duct with generally evenly dispersed electrons.

4. (Currently Amended) An electron beam treatment system comprising:
  - a duct having a rectangular cross section having a width and height through which a substance to be treated flows; and
  - first and second electron beam emitters each having a single exit window mounted to the duct and sealed over openings in the duct opposite from each other in opposed axial alignment for directing opposed electron beams into the duct to treat the substance, the duct being shaped and sized, and the electron beam emitters being operated, positioned, configured, shaped and sized to generate generally axially straight uniform electron beams directed into the rectangular cross section of the duct that are shaped to axially combine together to provide complete continuous uniform rectangular electron beam coverage across the width and height of the rectangular cross section of the duct with generally evenly dispersed electrons.
5. (Previously Presented) The system of Claim 4 in which the substance includes volatile organic compounds.
- 6-23 (Cancelled)
24. (Previously Presented) The system of Claim 5 further comprising a reactive bed positioned within the duct.
25. (Previously Presented) The system of Claim 24 in which the reactive bed includes pellets of reactive materials.